UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,222	12/09/2003	Richard Golasky	016295.1506	4594

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EXAMINER
NGUYEN, TOAN D

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/731,222	GOLASKY ET AL.
	Examiner	Art Unit	
	TOAN D. NGUYEN	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 December 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>25-28</u> is/are allowed.

6)☒ Claim(s) <u>1-19, 29 and 30</u> is/are rejected.

7)☒ Claim(s) <u>20-24</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>09 December 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 1-30 have been considered but are

moot in view of the new ground(s) of rejection.

The applicant argues with respect to claim 1 on page 11, second paragraph that

setting user configurations for the interface is not the same as determining the address

of the host that issued the original command. The examiner disagrees. Bolt teaches at

col. 9, lines 57-59:"The link 17 can also be used to perform tasks such as setting the

Fibre Channel ID, or Ethernet address of tape drive 148." Bolt teaches further at col. 14,

lines 40-42 (see figure 6, reference step 600):"Referring to FIG. 6, upon receiving

request from the host 12, the microbridge 25 determines if the corresponding data

transfer device 148 is operational (step 600)." And at col. 17, lines 27-29:"If in step 600

above, the microbridge 25 determines that the corresponding device 148 is

operational...). Therefore, an address of the one of the plurality of hosts that issued the

original command must be corresponding to the address of tape drive 148 (determining

an address of the one of the plurality of hosts that issued the original command means).

The applicant argues on page 2 second paragraph, that there is no motivation to

combine Hoard and Bolt, Hoard does not disclose the step of making a revise command

as required by claim 1 for which it has been cited. The examiner disagrees. The

examiner refers to the rejection below with respect to independent claims 1, 29 and 30.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

4.   Claims 1-2, 6, 12-18 and 29-30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bolt (US 6,766,412).

        For claim 1, Bolt discloses data storage media library with scalable throughput

rate for data routing and protocol conversion, comprising:

        issuing an original command from one of a plurality of hosts (figure 4A, reference

12), the original command is encoded in a first protocol (figure 5, reference 502, col. 14,

lines 28-30);

        receiving the original command by a protocol converting module (figure 4A,

reference 35, col. 8, lines 34-37; and figure 6, reference 610, col. 17, lines 30-32);

        determining an address of the one of the plurality of hosts that issued the original

command (figure 6, reference 600, col. 17, lines 27-29);

converting the first protocol to a second protocol, wherein the original command is encoded in the second protocol (figure 6, reference 610, col. 17, lines 30-32); and

sending the revised command to a target device (figure 4A, reference 148)(figure 6, reference 610, col. 17 lines 32-33).

However, Bolt does not expressly disclose adding an identifier to the original command encoded in the second protocol to make a revised command, the identifier associating the one of the plurality of hosts that issued the original command. To include the adding an identifier to the original command encoded in the second protocol to make a revised command, the identifier associating the one of the plurality of hosts that issued the original command would have been obvious to one of ordinary skill in the art because Bolt discloses at col. 1, lines 60-65:"Commands directed by the host to the drive may include "test unit ready", "inquiry", "start-stop" and "load-unload" commands, in addition to the obvious "read/write" commands. One important characteristic about this command structure is that the logical address of the drive is supplied (adding an identifier to the original command encoded in the second protocol to make a revised command, the identifier associating the one of the plurality of hosts that issued the original command means) to the media loader as a destination,..." Bolt discloses further at col. 15, lines 49-53:"..., when the host 12 dispatches a medium-changer command, such as EXCHANGE MEDIUM command (including a source storage media slot location and a final logical drive address of a specified drive (adding an identifier to the original command encoded in the second protocol to make a revised command, the

identifier associating the one of the plurality of hosts that issued the original command

means)),...".

For claim 2, Bolt discloses comprising converting the revised command to

the original command (col. 10 lines 50-51).

For claim 6, Bolt discloses wherein the physical layer includes a SCSI target

device (figure 6, reference 610, col. 17, lines 32-33).

For claim 12, Bolt discloses wherein the second protocol includes a SCSI

protocol (col. 10, lines 50-51).

For claim 13, Bolt discloses wherein the protocol converting module includes a

fibre channel to SCSI appliance (col. 10, lines 50-51).

For claim 14, Bolt discloses wherein the protocol converting module includes an

iSCSI-SCSI appliance (col. 8, lines 35-37).

For claim 15, Bolt discloses wherein the fibre channel to SCSI appliance includes

a module for determining the address of the host (col. 10, lines 50-51).

For claim 16, Bolt discloses wherein the iSCSI to SCSI appliance includes a

module for determining the address of the host (col. 8, lines 35-37).

For claim 17, Bolt discloses wherein the target device includes a module for

identifying the address of the host (col. 17, lines 32-33).

For claim 18, Bolt discloses wherein determining the address of the one of the

plurality of hosts that issued the original command includes decoding a fibre channel

frame to obtain the fibre channel port identification address, the fibre channel frame

including the original command and the fibre channel identification address of the host

that issued the original command (col. 17, lines 16-19).

For claim 29, Bolt discloses data storage media library with scalable throughput

rate for data routing and protocol conversion, comprising:

a plurality of hosts operably connected to a switch, one of the plurality of hosts

issuing an original command in a first protocol (figure 5, reference 502, col. 14, lines 28-

30);

an appliance (figure 4A, reference 25) for converting the first protocol into a

second protocol, the second protocol encoding the original command, the appliance

including a module for encoding the address of the host that issued the original

command (figure 4A, reference 35, col. 8, lines 34-37; and figure 6, reference 610, col.

17, lines 30-32); and

a target device (figure 4A, reference 148) responsive to the command in the

second protocol, the target device including a module for converting the revised

command to the original command (col. 8, lines 47-50, and col. 17, lines 32-33).

However, Bolt does not expressly disclose adding an identifier to the original

command encoded in the second protocol to make a revised command, the identifier

associating the one of the plurality of hosts that issued the original command. To

include the adding an identifier to the original command encoded in the second protocol

to make a revised command, the identifier associating the one of the plurality of hosts

that issued the original command would have been obvious to one of ordinary skill in the

art because Bolt discloses at col. 1, lines 60-65:"Commands directed by the host to the

drive may include "test unit ready", "inquiry", "start-stop" and "load-unload" commands, in addition to the obvious "read/write" commands. One important characteristic about this command structure is that the logical address of the drive is supplied (adding an identifier to the original command encoded in the second protocol to make a revised command, the identifier associating the one of the plurality of hosts that issued the original command means) to the media loader as a destination,..." Bolt discloses further at col. 15, lines 49-53:"..., when the host 12 dispatches a medium-changer command, such as EXCHANGE MEDIUM command (including a source storage media slot location and a final logical drive address of a specified drive (adding an identifier to the original command encoded in the second protocol to make a revised command, the identifier associating the one of the plurality of hosts that issued the original command means)),...".

For claim 30, Bolt discloses data storage media library with scalable throughput rate for data routing and protocol conversion, comprising:

issuing an original command from one of a plurality of hosts (figure 4A, reference 12), the original command is encoded in a first protocol (figure 5, reference 502, col. 14, lines 28-30);

receiving the original command by a protocol converting module (figure 4A, reference 35, col. 8, lines 34-37; and figure 6, reference 610, col. 17, lines 30-32);

determining an address of the one of the plurality of hosts that issued the original command (figure 6, reference 600, col. 17, lines 27-29);

converting the first protocol to a second protocol, wherein the original command

is encoded in the second protocol (col. 10 lines 50-51); and

sending the revised command to a target device (figure 6, reference 610, col. 17

lines 32-33).

However, Bolt does not expressly disclose adding an identifier to the original

command encoded in the second protocol to make a revised command, the identifier

associating the one of the plurality of hosts that issued the original command. To

include the adding an identifier to the original command encoded in the second protocol

to make a revised command, the identifier associating the one of the plurality of hosts

that issued the original command would have been obvious to one of ordinary skill in the

art because Bolt discloses at col. 1, lines 60-65:"Commands directed by the host to the

drive may include "test unit ready", "inquiry", "start-stop" and "load-unload" commands,

in addition to the obvious "read/write" commands. One important characteristic about

this command structure is that the logical address of the drive is supplied (adding an

identifier to the original command encoded in the second protocol to make a revised

command, the identifier associating the one of the plurality of hosts that issued the

original command means) to the media loader as a destination,…" Bolt discloses further

at col. 15, lines 49-53:"…, when the host 12 dispatches a medium-changer command,

such as EXCHANGE MEDIUM command (including a source storage media slot

location and a final logical drive address of a specified drive (adding an identifier to the

original command encoded in the second protocol to make a revised command, the

identifier associating the one of the plurality of hosts that issued the original command

means)),...".

5.   Claims 3-5, 7-11 and 19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bolt (US 6,766,412) in view of Yao et al. (US 2003/0084219).

For claims 3-5, 7-11 and 19, Bolt does not expressly disclose wherein the original

command includes a fibre channel command. In an analogous art, Yao et al. disclose

wherein the original command includes a fibre channel command (page 2, paragraph

[0025], lines 4-13).

Yao et al. disclose further wherein the original command includes an iSCSI

command (page 2, paragraph [0025], lines 4-13 as set forth in claim 4), wherein the

revised command includes a SCSI command (page 2, paragraph [0025], lines 4-13 as

set forth in claim 5), wherein the host includes a fibre channel host (figure 10, reference

235, page 5, paragraph [0047], line 5 as set forth in claim 7), wherein the host includes

an iSCSI host (figure 10, reference 240, page 5, paragraph [0047], line 8 as set forth in

claim 8), wherein the first protocol includes a fibre channel protocol, and wherein the

address of the host includes a port identification address (figure 10, reference 255, page

5, paragraph [0047] as set forth in claim 9), wherein the first protocol includes an

Internet protocol, and wherein the address of the host includes an index, the index

associating an Internet protocol address or iSCSI node name (figure 13, page 6,

paragraph [0057], lines 10-15 as set forth in claim 10), wherein the first protocol

includes an iSCSI protocol (figure 10, reference 240, page 5, paragraph [0047] as set

forth in claim 11) , wherein determining the address of one of the plurality

of hosts that issued the original command includes decoding an iSCSI protocol data unit

to obtain an IP address and an iSCSI node name, the iSCSI protocol data unit including

the original command, the IP address of the host that issued the original command, and

the iSCSI node name of the host that issued the original command (page 4, paragraph

[0044] as set forth in claim 19).

One skilled in the art would have recognized the wherein the original command

includes a fibre channel command, and would have applied Yao et al.'s Fibre channel in

Bolt's data transfer device interface 25. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention, to use Yao et al.'s system, apparatus

and method for address forwarding for a computer network in Bolt's data storage media

library with scalable throughput rate for data routing and protocol conversion with the

motivation being disclosed addresses and commands between various protocol that

may be used by network devices (page 2, paragraph [0025]).

Allowable Subject Matter

6.   Claims 20-24 are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

7.   Claims 25-28 are allowed.

Regarding claim 25, the prior art fails to teach a combination of the steps of:

modifying the control field of the original SCSI command encoded in the

SCSI protocol to include an identifier to make a revised SCSI command, the identifier

associating the one of the plurality of hosts that issued the original SCSI command

encoded in the fibre channel protocol, in the specific combination as recited in the claim.

Regarding claim 26, the prior art fails to teach a combination of the steps of:

encoding the port address of the host that issued the original command in the

control field of the original SCSI command encoded in the SCSI protocol to make a

revised SCSI command having a revised control field, in the specific combination as

recited in the claim.

Regarding claim 27, the prior art fails to teach a combination of the steps of:

modifying the control field of the original SCSI command encoded in the SCSI

protocol to include an identifier to make a revised SCSI command, the identifier

associating the one of the plurality of hosts that issued the original SCSI command

encoded in the iSCSI protocol, in the specific combination as recited in the claim.

Regarding claim 28, the prior art fails to teach a combination of the steps of:

encoding the IP index value of the host that issued the original command in the

control field of the original SCSI command encoded in the SCSI protocol to make a

revised SCSI command having a revised control field, in the specific combination as

recited in the claim.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to TOAN D. NGUYEN whose telephone number is

(571)272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. D. N./

Examiner, Art Unit 2616

/Frank Duong/
Primary Examiner, Art Unit 2616